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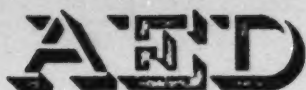
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ABSTRACT

Rural adult education projects using television in Tanzania, the Ivory Coast, Dominican Republic, and Guatemala are described and compared with special attention given to objectives, organization, selection and recruitment of supervisors, monitors and participants, use of communication media, feedback and evaluation systems impact, and constraints. The Dominican Republic's Radio Schools of Santa Maria (RSM) is judged most successful in terms of impact and enrollment. It is suggested that RSC (Radio Study Campaign) in Tanzania acts the most directly as a means through which the state influences and transforms the socio-political climate and economy of the country in accordance with domestic and international political and economic power relations. (JEG)

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Rural Adult Education
and the Role of Mass Media:
A Comparative Analysis of Four Projects

by
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August, 1977

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INTRODUCTION

This paper is meant to compare four rural adult education projects that use media as an important component. We will try to describe each project in some detail, giving special attention to the following characteristics: objectives; organization; selection and recruitment of supervisors, monitors and participants; use of communication media; feedback and evaluation systems; impact (insofar as evidence is available) and constraints. Such an examination should provide the reader with a general understanding of how each system operates and its strong and weak points within its own context. Equally important for the reader is the judgment of whether the variety of approaches represented here has anything to offer other countries who are facing similar problems in rural adult education.

A more specific purpose of the paper is to provide decision-makers in the Ivory Coast with a brief analysis of their own Extra-Scolaire project, along with three other approaches to adult education (from Tanzania, Guatemala and the Dominican Republic). Such an analysis should help them reexamine their own efforts in the light of evaluation evidence on their own and other cases.

I. Adult Education, Rural Development and the Role of the State

The presentations that follow below suggest that the four cases all work in some sense. That is, they reach rural audiences of various sizes with mediated messages, evoke discussion, promote learning and provide a starting point for actions taken by listening groups. All of these systems can considerably improve their effectiveness by a series of changes that will become obvious from the discussion. This improvement would affect the internal efficiency of the adult education/information systems. What interests us here at the beginning of this paper, however, is to understand what the external efficiency or social benefit might be for these rural adult education projects. This suggests a related question of how these projects function within the context of their countries. We may ask the question why, especially within the last ten years, countries have begun to pay special attention to adult education for the rural masses and often with the help of mass communication? Countries as politically distinct as Tanzania, with a socialist government, and the Ivory Coast that has adopted an explicitly state capitalist model have both opted for mass media systems that are in many ways very similar. If there is a common link, what might it be?

The four cases discussed here which might be termed not merely education but education/information/communication systems (EIC), are focused especially on the rural areas of their countries. The contention of this paper is that the extension of EIC's, especially to rural areas, cannot be understood as chance occurrences but rather needs to be understood in the light of the notion of "state-intervention" (Goussault, 1976). It is a characteristic of most third world countries that the state intervenes heavily in the planning and the execution of development projects. This intervention is not limited to

the usual technical or economic assistance and investment nor only to the social services but is at the same time both political and ideological. The logic of this action is not difficult to follow.

All of the four countries in our sample (The Dominican Republic, Guatemala, Ivory Coast and Tanzania) have a significant proportion of their population in rural areas. These populations often form a majority and are usually the majority with the least benefits flowing from economic growth. In many countries, economic growth depends on the improvement of productivity of the rural areas, especially in the modern growth centers where export or market crops are concentrated. In addition, there is an urgent need to improve the economic viability of the large traditional areas which are becoming worse off as the modern areas improve. As the population increases in traditional areas, a larger and larger surplus population is pushed out toward cities where employment is scarce, and large marginal populations work in the "informal" economy and present more directly political problems for the state. Rural development plans have grown with these problems, and EIC's have become an important part of many rural development efforts.

Increasing rural output is a complex mechanism that requires not only investment in infrastructure and crop diversification, especially in introducing more and better earning export crops, but also depends on the improvement of living conditions, health care, and qualification of the rural labor force, and thus its productivity. As it is described here it seems as if the rural development intervention is primarily a provision of investment and of services with voluntary participation of the rural masses. The process is more complex, however, for rural development means for most third world countries, whether socialist or capitalist, an invasion of a

Money economy into large traditional areas and an incorporation of rural people into a different kind of production with a different set of social relationships. The extent and depth of this change has been recorded by social and political scientists in many places (Amin, 1967; DeJanvry, 1975; Stavenhagen, 1976). The role of the state not only lies in controlling, regulating, impeding or advancing this transformation in economic terms but also in preparing the rural population "mentally" or "ideologically" to abandon ancient beliefs and behaviors which hamper this transformation, and to accept innovations which would adapt the population to the "new realities." In other words, ideological intervention by the state is required. Whether this takes place in a socialist or a capitalist context does not invalidate this observation. What we wish to examine later is whether the external benefits of the various EIC's are distributed more or less equitably to their intended audiences, and secondly, whether and how the EIC systems work internally.

Besides the economic and ideological aspect of state intervention in rural development, there is the political aspect. The state power or authority has to be expanded into or reinforced in the rural areas, on the one hand, and this authority in the form of rural development plans, for example, must be accepted and recognized as legitimate by the rural population. As Goussault puts it, state intervention "appears to be a complex process which in equivocal and often contradictory ways imposes economic measures by more or less directive means which are determined in function of the political relationships and ideological conditions forming the link between the state and the rural sector" (1976, p. 617).

Now we must examine more closely a set of related questions: what is the role of EIC's in the rural development plans of the state and what role

specifically do the mass media play? What role does rural "participation" play in these EIC's, and finally, what relation do these EIC's have to external benefits like improved rural employment, productivity and improved quality of life?

Since we are talking about countries that are still largely rural, the state has to reach its rural masses through a massive effort. In most countries, radio communication covers almost all of the national territory, and it is less than surprising that the state makes use of these means as one important way to prepare, promote and legitimate its activities or to ideologically influence its citizens. If we use the term "ideological" in this sense, then both the mass media and education can be considered widely diffused and appropriate means in promoting the plans of the state in rural areas. Education, in the traditional sense, had served the interests of the state. As colonial structures gave way to more "modern" institutions, then education was asked to perform other functions, but always in training people for their roles in society, both those regarding work and those relating to social life. Rural adults play an important role in the rural development plans of the state, and one way to assure their playing this role is through education, whether in a formal school or in a nonformal context, or simply by providing information for immediate application to tasks to be done. The mass media system guarantees at least a one-way link to almost every rural area and assures that the message is less likely to be distorted through various intervening human linkages. The EIC's, therefore, serve the needs of most modern states in their rural development plans in a way that other structures like mission schools or a colonial administration served the needs of the colonial state in previous periods.

It should be noted, before continuing, that this analysis is meant as a broad context for understanding the function of different adult education projects. Often when "communication" projects are analyzed, they are taken in a narrow technical sense and promoted or rejected on their "success" or "failure" in terms of their internal efficiency, or how well they achieve immediate goals of teaching or stimulating action. We continue to be interested in the success or failure of these projects, but we need to examine them in the light of longer term goals they aspire to, not only the more immediate ones that are often the focus of evaluations.

Participation in rural development projects may have many levels and many meanings. From the point of view of the state, it is a sine qua non of rural transformation. How rural adults participate depends on both a variety of local cultural and political factors as well as the explicit approach taken by the project. In Tanzania, participation is in the form of mass mobilization in which rural masses are encouraged by mass publicity and personal persuasion through the TANU cell system to take part in the radio campaigns. The Ivory Coast and Guatemala have not attempted to mobilize but to work with groups of volunteers. The Dominican Republic project is taking advantage of a selected population motivated by an opportunity to better themselves and probably immigrate to urban areas. Ideally the state would like rural people to become self-reliant--but to do so within the context of their plans for rural areas. In Tanzania the appeal is frankly political; in other countries this appeal is more individual, holding out education as a means for self-improvement (although community values are not neglected).* Given the present capitalist structures

*Animation Rurale, the underlying philosophy of the Ivory Coast project, starts its activities on the community basis. (For a good analysis of animation rurale, cf. Moulton, 1977.)

in these countries, however, such a motivation makes the most sense to rural participants. The desire to participate, however, may be lacking for many reasons which constrain the success of the state in implementing its plans and solving its rural problems. Often we look to the project itself and how it is run as the source for these constraints, but often these may be external and have to do with the structures of the rural areas themselves as well as with the structure of the national political economy.

And what are the longer term benefits of the EIC's that the state promises and how realistic are they? In many cases where the benefits for individuals are concrete and attainable, the project, if properly organized, can succeed. Such seems to be the case in the Radio Santa Maria in the Dominican Republic for providing young rural people with a recognized primary school degree necessary for most jobs in the city. With the other three cases the answer is less clear. Adult education can have many objectives, both for individuals and for the state, and the two are not necessarily the same. Although in most projects the explicit goals are those shared by both state and individual, the benefits are not always shared. The transformation of rural people into more productive farmers, for example, provides benefits for those, at least, who own or can rent land. Becoming more productive for a day laborer working for someone else may not strike him as being a useful goal if he does not share in the benefits. Likewise, literacy acquired at great effort may not noticeably improve the quality of a rural person's life, although in the aggregate a literate rural population may be a desirable state goal, especially since literacy training programs automatically convey a certain number of "ideological" values. Incorporation of traditional subsistence farmers into

a cash crop economy may increase exports but it may not provide a great improvement in a farmer's earnings because he has to buy a great many more inputs to produce the cash crop, and thus additional expenditures offset easily his small monetary benefits (Benito, 1977). Finally, at worst, provision of education for rural adults in some form or other can convince people that the state has made the effort to make people literate, healthier or better off, and failure is often seen as a personal one and not a failure of the system (i.e., the state). Thus the mere repetition over the mass media of a "plan" for rural areas could legitimate the state's effort in many rural people's minds, whether this effort results in tangible benefits for the rural population or not.

We have no immediate answers to many of the questions that are posed in this section. It would be a mistake, however, to say that answers can only be sought many years after a project is undertaken. We would argue that external efficiency is an important assumption of most EIC's in developing countries and that this assumption must be tested before projects are undertaken from whatever evidence is available from other similar projects and from a careful analysis of the situation of each country (e.g., what proportion of rural people are landless before an EIC is undertaken to promote agricultural productivity for small farmers). Once the project has justified its longer term goals, then it can turn its attention to the internal efficiency questions. The next section of this paper will examine four EIC's in the light of this perspective.

II. Four Adult Education Projects

A. Introduction.

In the previous section we attempted to put into the broader context of external efficiency the four adult education projects we are about to compare. We now shall turn to a brief description of each project, the Radio Study Campaigns in Tanzania, the Out-of-School Educational Television in the Ivory Coast, the Radio Schools of Santa Maria in the Dominican Republic and the Nonformal Education Module in Guatemala. Then we will make a comparative analysis of the four projects. We have chosen seven categories under which we shall describe and compare these projects: objectives, organization, selection and training of personnel and recruitment of participants, uses of media technology, feedback and evaluation systems, impact and constraints.

B. Project Descriptions.

1. The Radio Study Campaigns in Tanzania.

Since in 1967 President Nyerere presented his "Education for Self Reliance," Tanzania has tried to change its education system "from one that tends to impart knowledge as a commodity which gives the possessor not only a market value but also an (elite) class consciousness to one which gives knowledge for the development of Man in Society or the liberation of Man from the restraints and limitations of ignorance and dependency" (Matiko, 1976). This was one of the reasons why Tanzania decided to use its mass media mainly for educating the people, "and this is why TANU (the political party of mainland Tanzania) has taken educating adults as one of the most important duties, and therefore gives the

necessary drive needed for the success of the adult education campaigns" (Matiko, 1976). The Radio Study Campaigns (five campaigns were held in the period from 1969 to 1976) are one of the mechanisms by which the goals of "Ujamaa" (Tanzanian socialism) and adult education must be reached.

In many respects the methods of the Radio Study Campaigns are similar to those used in the rural radio forums*: radio programs are supported by printed booklets which form the basis for the group discussion that takes place after the group has listened to the radio and studied the printed documents. The Radio Study Campaigns have, however, three features which distinguish them from the usual radio farm forum approach:

a. The series of radio programs lasts a limited period of time (usually 10-12 weeks). Each series is launched with a new publicity campaign and is followed by a break period before a new series is prepared (sometimes 12-18 months). It has the advantage that each new campaign starts afresh and demands a short-lived burst of attention on one single subject, and the length of the series can be varied according to the subject and to the estimated attention span of the audience.

b. The campaigns require a coordinated effort of a variety of institutions, both at the production and at the field level.

c. There is a strong emphasis on training of prospective study group leaders. Evaluation studies have provided evidence that the training sessions play an important part both in publicizing the campaigns and in equipping the group leaders to carry out their duties effectively (Dodds, 1972).

*Radio farm forums were started in Canada and later spread to India, Ghana, Dahomey and many other countries. See Schramm (1977), McNany (1973) and Rogers et al (1977).

2. Out-of-School Educational Television in the Ivory Coast.

In contrast to Tanzania's "Ujamaa" or socialism, the Ivory Coast pursues a basic capitalistic development model. In a recent interview, President Houphouet-Boigny declared that "we are not socialists to the extent that we are not partisans of a priority distribution of our wealth, and to the extent that we first want to create and multiply our wealth" (Le Monde, 1976). Despite a consciously adopted model of development fostering unbalanced growth and favoring the agricultural export sector of the economy, there is recent interest in rural participation in development and increasing social services for the so-called rural masses. The state has opted for an educational television system (complementing the existing ordinary TV system) as one of the main tools in education and rural development efforts.* Since 1971 lessons are telecast for the primary school students. During the school year, once or twice a week, after the evening news the out-of-school education department of the Ministry of Primary and Television Education broadcasts the "Télé pour Tous" ("TV for Everybody") programs. These programs are aimed at an audience of illiterate adults, of schooled and non-schooled youth, and of young school dropouts, especially in the rural areas. The TV programs are cast in a dramatic or didactic mold. Their commentary is in French (the official language of the country, though there are a large number of different language groups). The programs are received in the local schoolhouse,** where an animateur, one of the local elementary school teachers, has gathered a listening group who watches

*For a more extensive description, see: Institute for Communication Research, 1976, and DIRECT, 1975.

**In 1976-77 there were about 1,700 public elementary schools equipped with at least one TV receiver. About 75 percent of them are in the rural areas.

the telecast and discusses its contents afterwards. Prior to the broadcast the animateur has received documents which enable him to better explain the content of the TV broadcast and more effectively lead the discussion, which is supposed to result in a decision concerning an (communal) action related to the subject of the program.

3. Radio Schools of Santa Maria in the Dominican Republic.

The Radio Schools of the Santa Maria radio (RSM henceforth) station in the Dominican Republic provide opportunity for equivalency schooling for the first eight grades through a radio-based distance learning approach.* This system, based on the model of the ECCA (Emisoras Culturales Canarias) system in the Canary Islands, consists of the following elements: 30-minute radio broadcasts, five nights per week; exercise sheets to be filled out during the broadcast, as well as exercises for later; a weekly meeting with a local teacher who receives the weekly exercises, hands back corrected exercises, provides new worksheets for the coming week and answers questions the student may have; a weekly group meeting with a number of students to discuss the weekly theme with the teacher (the themes are integrating ideas that run through the subject matter and touch on important social and political realities of the Dominican Republic); a 25 cent fee paid by each student partly pays the teacher (15 cents) and partly goes to operate the system (10 cents); a careful feedback system from teachers to the central headquarters provides information on students and any particular problems encountered; teachers are reached by a newsletter, receive new worksheets in the mail and are occasionally visited by a supervisor; students can cover one school year

*cf. Robert White, "The Use of Radio in Primary and Secondary Formal Education: the Santa Maria Model in the Dominican Republic" in Spain, Jamison & McAnany (1977).

every six months and finish the eight grades in four years by studying with RSM.

Begun in 1970, the equivalency system now reaches almost all rural areas. Since the 1972/73 school year, the initial enrollment over the eight grades has been about 21,000 per year, with about 12,000-13,000 promoted annually. The two diplomas given after sixth and eighth grades are recognized by the State and are important requirements for work in many sectors of the economy, especially in urban areas. White (1976) reports that most students are young adults (median age is less than 18), 80 percent from rural areas and 80 percent single. More than 50 percent of sixth and eighth grade students surveyed by White plan to leave their community at the end of their schooling and probably migrate to more urban areas. This fits in with the circumstances of the Dominican Republic where the annual economic growth rate has been almost 10 percent but where the main benefits of this growth have been received in the urban and not the traditional rural areas (White, 1976).

4. The Nonformal Education Module in Guatemala.

In its 1975-79 National Development Plan for Education, Science and Culture, the Guatemalan government proposed a new program for nonformal education. During 1975 and 1976 this plan was gradually brought to implementation. At present it is only beginning its operations so that the description of its operations and especially of its potential impact will have to remain partly hypothetical. It is included here because it is an important effort to create a mass adult education program for rural areas with some integration of the mass media, and thus it fits within the framework of the EIC's discussed in the previous section. There are, moreover,

several unique features of the project that are important to be discussed in the context of education for rural development.

The following brief description is based on the nonformal module education project as it now exists and not necessarily as it was originally proposed. Since a majority of Guatemala's approximately six million inhabitants are neither linguistically nor culturally related to the dominant Spanish culture but are of Mayan heritage, the school system has not reached many of these people, many of whom are concentrated in the western highlands of the country. Although the nonformal system was supposed to eventually reach the entire adult population, the proposal was to begin in the highlands and to gradually expand to other geographical and cultural sectors of the country. Since the severe earthquake in early 1976, the system has also been planned to begin in communities in the earthquake area, although most of these are in Indian and not Ladino communities.

The project began with the recognition that the formal school system was not and could not be expected to reach the large unschooled adult and even adolescent population that existed especially in the highlands, at least in the short or middle term of the next five to ten years. Therefore, the government had to make a special commitment of effort and resources to this neglected rural population. A second important assumption was that the curriculum and the organization of the formal school system would not correspond to the educational needs of these rural people. Finally, from an analysis of the many different kinds of training and nonformal education given in a large number of ministries and government agencies (agriculture, health, labor, community development, etc.) other than the Ministry of

Education, it was concluded that a significant amount of educational resources was being expended and that the real impact of this in rural areas was being impaired from lack of integration and coordination.

As a consequence of the above line of reasoning, a new interministerial organization, the National Junta for Out-of-School Education was formed with official representation by seven ministers or their equivalents from the Ministries of Education (presiding over the Junta), Agriculture, Health, the Army, Planning, Community Development and Labor (Training). This body also had an executive arm in its coordinating secretary and his office which was to be responsible for the execution of the nonformal education program. Within this Coordinating Secretariat there are three branches: the administrative, the technical planning and the operational. The first, Administration, performs the usual administrative duties of any organization--accounting, personnel, buying and transport. Technical Planning has three important subsystems--research and evaluation, content development and program production. The operational branch has a regional coordinator's office in the main city of the highlands, Quetzaltenango, and a system of coordinators at state and county levels, as well as village workers called monitors.

With this structure, how is the system supposed to operate? When it becomes fully operational, it is expected that the monitor in the village will work with organized learning/discussion groups, aided by printed material and some form of regular radio program, plus the occasional presence of a technical expert in the different areas of health, agriculture, literacy, home economics, etc., who are agents of different ministries working in rural areas. The idea is to base the course materials on the

expressed needs of the communities and to develop the content with the help of the different ministries involved. Thus the work of the Secretariat of the Junta would be to coordinate the efforts of the agencies belonging to the Junta rather than create a new project for rural adults. Precisely how this will work out in practice remains to be seen as the first two hundred monitors were hired and trained in the early part of 1977, and programs are only being developed at present.

C. Components of the Systems.

1. Objectives: Comparing the objectives of the different rural adult education projects, we should heed several cautions. First, we should be aware of the differences between stated and implicit purposes that we discussed earlier in the paper. Secondly, in describing objectives in this section, we should return to these in the later section on impact to see to what extent these objectives have been accomplished. Third, objectives depend very much on the person who is stating them and the time when they are stated. In other words, objectives are often not clearly agreed upon by everyone and often change over time. With these qualifications we will state the objectives of each project and make some comparisons among them.

The objectives of the Tanzanian RSG's are explicitly stated but vary from campaign to campaign. In the early campaigns from 1969 to 1971, the "mobilization" aspect was stressed and people were urged in larger and larger numbers to participate in what was basically political education campaigns (e.g., elections, the government system, the tenth anniversary of independence). Later in 1973 and 1975 the campaigns, while still keeping a mobilization purpose and relying on political motivation stressed self-help

and self-reliance in national health and nutrition campaigns. These were meant to "give more knowledge, but also to each participant a sense of self-confidence in being able to change his own quality of life and that of his community" (Matiko, 1976). These objectives for the RSG's must be seen in the light of the national commitment of Tanzania to adult education.

Such commitment can be seen in the seminal document of President Nyerere (also a former teacher), Education for Self-Reliance, where adult education was emphasized. In 1970 and 1971 Tanzania declared Adult Education years and stress was laid on making village schools centers of increased village-level adult education activities (Hall and Dodds, 1974). The RSG's were only one of many adult education activities carried out by the government. For Tanzania, all this testifies to a national awareness of the needs of adult education and that commitments are made to meet these needs.

In the Ivory Coast this national awareness and commitment is not so strongly in evidence. In official planning documents mention is made about an "out-of-school system of permanent education" (Diawara, 1976) and the major objective of human advancement ("promotion humain"), but the daily political and administrative reality shows the absence of a coherent national adult education policy. For example, different ministries and government agencies are involved in similar activities of literacy, rural animation, rural job training and rural information with little or no coordination of these efforts.

The OSTV program is officially defined as an "educational action which allows all Ivorians, rural as well as urban, to understand the development actions, to participate in the improvement of their living conditions, and in a better distribution of the fruit of economic progress" (Ivory Coast, 1975).

The TV programs are meant to lead to local reflection, decision and action for solutions of local problems, always in relation to the administrative and political authorities. Unlike Tanzania, Ivory Coast does not stress mobilization in its OSTV program. More emphasis is placed on (1) people's acquiring the knowledge of the economic, political and administrative structure in order to bring especially the rural population in contact with the outside world, and to allow the people to use the various services (e.g., Prefecture or local government administration, dispensary, bank, extension service, etc.); (2) introducing techniques to improve production in order to go from a subsistence economy to an exchange economy; (3) education for the improvement of social and sanitary conditions; and (4) creating awareness of existing situations and of solutions for inserting the masses into the modern world without breaking with certain traditional values (Ivory Coast, 1976).

Although RSM in the Dominican Republic is a private, church-related project, its objectives do not go contrary to those of the government. There is a continuing effort to maintain good relationships with the Ministry of Education since the official recognition of RSM's sixth and eighth grade degrees depends on the agreement of this agency. The Ministry's own adult education effort, although handling about 40,000 students in 1974-75, is almost entirely limited to urban areas. Thus RSM supplements the work of the government in rural areas and helps to expand the supply of trained manpower for the country's continued economic growth.

The specific objectives of RSM are seven (White, 1977): (1) to provide accelerated primary and intermediate (grades 1-8) education, using radiophonic methods for rural and lower-status urban populations; (2) to

coordinate the content and exams with the official system so that diplomas will be officially recognized; (3) to use innovative instructional methods so as to help rural students to achieve as well or better than those in conventional schools; (4) to avoid rote learning and develop initiative and self-directed learning in young adult students; (5) to reformulate the curriculum so as to stress problems (themes) from the marginal context of rural or urban life and to stress the relation between content and other learning experiences in community life and work (horizontal integration); (6) to provide a vertical integration of the regular courses with other nonformal courses in areas like agriculture, health, etc. that RSM sponsors; (7) to introduce special forms of efficiency in supervision and administration to reduce costs and avoid dependence on international financing for operational costs.

It seems clear from the account of operations given by White (1976) and other materials, as well as a visit by one of the authors, that RSM not only has specifically defined objectives but tends to follow them faithfully in their operations. There is a clear philosophy of education behind the weekly themes that emphasize social justice and participation of individuals in community growth. Nevertheless, the social objectives are ideals that may have more importance for the dedicated members of the RSM hierarchy than for many of the individual students who are anxious to get a diploma and a job in the city.

The Guatemala nonformal education project referred to as Basic Rural Education (BRE) in English, has suffered some of the problems that the Ivory Coast has experienced in that, although an important commitment was made by the government to the project, a clear philosophy and generally agreed upon

objectives have emerged very slowly. What has been agreed to in several official documents are these two general points: (1) to expand coverage of the nonformal education system (referring to any organized educational activity apart from school--aimed primarily at adults of 15-45 years, who through skills acquisition and information can make improvements in their lives). first in the western highlands and later throughout the entire country; (2) to achieve an adequate coordination of nonformal-related public sector services, developing and communicating an integrated educational message centered around the knowledge, attributes and attitudes of the target population in agricultural development projects. More specific objectives are more a shopping list of possibilities than anything else, since no clear decision had been taken as to precise direction by mid-1977. Some examples are: to introduce simple concepts and basic techniques of small industry; to teach skills relevant to the preservation and improvement of health, nutrition and home life; to communicate, inform and teach basic concepts of marketing, credit and possibilities for obtaining financial assistance; to teach reconstruction techniques in earthquake-affected areas.

The problems of implementation of BRE have been many, but perhaps one of the key problems has been the lack of some clear choices on the part of the project in the following areas: target audience; one or a few of the specific objectives; and the precise configuration of the delivery system, incorporating monitor, mass media, printed material and outside technical advisors. Since no such choices have been made, the structure of BRE is functioning but there does not seem to be anything to do.

In the Tanzanian and the Dominican projects, objectives are fairly clear and precise although fairly narrow and limited. Definite actions are

called for and are followed and the limited objectives have a better chance of being achieved. Guatemala and the Ivory Coast have larger aims about general rural development over longer time horizons, and as a consequence, objectives are harder to define and guided actions seem harder to take.

2. Organizational Structure.

Tanzania's Institute of Adult Studies, formerly belonging to the University of Dar es Salaam, but now an independent government agency, is in charge of organizing the radio study campaigns. It relies heavily on the contribution of other ministries and technical agencies in the definition of content and the recruitment of listening groups. Hall and Dodds (1974) comment that "No one institution could possibly have commanded the many and varied resources that were made available. . . . That such coordinating machinery could be developed in a few years has been due in large measure to the particularly favorable climate of official and political opinion toward adult education. . . ." This refers to the strong commitment of the state and the party to this goal, which in turn facilitated the collaboration of different agencies with the Adult Studies group to carry out the various campaigns.

In the Ivory Coast, the OSTV, under the Ministry for Primary and TV Education, operates in a somewhat similar manner. OSTV offers, in effect, to make one or several TV programs for other government agencies. There is strong cooperation between OSTV and ministries and agencies in whose field of competency the TV programs are scheduled. First, a large number of institutions take part in an annual planning meeting to determine the needs of each of them in having one or more programs. OSTV must make a final decision among the possible candidates, since not all can be accommodated.

Once a programming schedule has been decided upon, taking into account the objectives of the national five-year plan, the agencies participate in a working group to define the precise goals and content of the TV film(s).

In theory the organizations are asked to evaluate the impact of the program(s) as well as to involve their field agents in possible follow-up actions. This is not done in practice and OSTV makes the film, broadcasts it, and does the animation with its primary school teacher animators. Only through specially motivated field agents does any genuine follow-up take place. OSTV thus remains a kind of production and animation service for the other institutions, who seem to look upon their TV films as a kind of public relations investment. In the case of a few series related to a specific campaign, such as the one related to water in 1975, there seems to be a coordination between OSTV and other institutions that will result in collaboration at the field level and support follow-up actions.

RSM in the Dominican Republic represents a private agency working in rural adult education. We should underline two important achievements of RSM in terms of its organization. First, it has managed to maintain good relations with the Ministry of Education and thus assured itself of official recognition of degrees (an important part of the motivation of RSM students). Second, it has achieved a very tight organizational structure which, with an entire central staff of less than 25 (of whom less than half are professionals), can operate a system with 520 centers and about 20,000 students spread throughout the country, and do this in a cost-effective way. Part of this is due, of course, to the fact that as an independent organization it is free of the burden of bureaucracy. Another factor is undoubtedly the structure of the ECA model it has adopted from the Canary Islands. Finally there is the

personal leadership and administrative ability of its founder and present head. This personal factor plays a more prominent part in an independent organization and especially one that has remained small and under the control of a strong leader.

The BRE project in Guatemala operates within the structure of an interministerial National Junta for Out-of-School Education. Certainly one of its important features is that structurally it lies outside the major government agencies and yet has a budget and executive power to coordinate all nonformal education activities. In addition, at its inception it had the strong endorsement of the president and the backing of many bilateral and multi-lateral aid agencies. The idea was to rationalize the nonformal educational activities of government organizations. The main ones, included in the Junta, would be officially in charge of the activity of BRE, yet an executive secretary would be able to carry out the nonformal education activities in the rural areas with the general guidance and concurrence of the Junta members.

Although nonformal education and especially integrated rural development call for a kind of approach taken by the structure of the Junta, plans have not worked out as well as expected. Fundamentally, BRE is having difficulty trying to coordinate ongoing activities without creating its own independent program to compete with already existing ones. The Ministry of Education still institutionally believes that education, nonformal as well as formal, is its domain. If BRE were within this ministry, then it would solicit the collaboration of other ministries with Education. Since this collaboration has proved difficult historically and in theory, some such institution as the Junta seems called for if real

inter-agency collaboration for nonformal education is to take place.

Unhappily, BRE in its present form has encountered a large number of problems and has been slow to begin an action after several years of planning. How viable the structural idea behind it is will have to be judged in the light of several more years of experience.

3. Discussion Groups and Monitors.

There has been considerable discussion in the literature concerning radio group listening and discussion (Jamison and McAnany, in press; Rogers et al., 1977) as well as individual listening. Three of the four projects we are discussing here use this form for learning as well as follow-up action. The sole exception is RSM of the Dominican Republic whose goals are more related to formal education in a distance learning approach. Even RSM, however, has some group meetings, and the questions of how teachers as monitors are recruited and trained and how participants are recruited is important to all four of the projects.

Tanzania's large campaign approach has certain consequences for study group leader recruitment and training. In the last two campaigns, over 75,000 group leaders were recruited and trained in the last few months before the campaigns. This involves a large number of two or three day seminars repeated over the country with previously trained leaders training others in turn. Leaders are recruited on a variety of bases, among them: election by the discussion group, volunteers, selection by local political leaders of TANU, selection by local Adult Education Officers and, during the 1975 campaign, the literacy teacher led his group in discussions. How the majority of leaders are actually chosen is not clear, but we know that they are from the communities themselves, often have no greater education than

their fellow participants and have received a brief training in the basics of group discussion (Hall and Dodds, 1974).

Group discussion principles seem fairly common throughout most of the world where radio and rural discussion groups have worked. Among other things group leaders are taught: not to be teachers but facilitators, information sources and discussion leaders; to use group interaction techniques; to recruit members from the village and notify the group when programs are to be broadcast; and to have a profound knowledge of the principal campaign themes and issues.

This is only a superficial summary for what has been a serious effort at creating a philosophy of development by people interested in animation rurale, especially in Francophone countries and Latin America (Benveniste, 1976; Moulton, 1977) and in community development in English-speaking countries. Nor does this include reference to the Paolo Freire method, popular in many discussion groups throughout the world. However, practice is often far from theory, and the way in which leaders are trained in a few days or a few weeks often waters down theories to an imperfect practice.

Recruiting group members in Tanzania has some special characteristics. First, members are recruited for a relatively short period of participation of 10 to 12 weeks. Also there is extensive publicity preceding the campaign, including radio spots, songs, competitions, newspaper articles and announcements through local church and political groups. There is, as we have already noted, an endorsement from the government and recruiting efforts by local TANU cell groups. All of this resulted in the last two campaigns of 1973 and 1975 in the mobilization of one or two million people, mostly rural adults. Since campaign aims are very broad, there is

usually no special "target" audience, but the evaluation of the 1973 campaign (Hall and Dodds, 1974) indicated a slightly greater participation by men than women.

In the Ivory Coast, the OSTV has decided to use the primary school teachers in TV schools as animators. This decision has a number of consequences. First, the principle of group discussion that the leader not act like a teacher but a facilitator is difficult to carry out. The teacher has developed certain mechanisms and a self-image; people know he is a teacher and react according to this perception. Second, teachers are often not from the local area and do not speak the local language. Therefore, the translation of the French language program into the local language must be done by someone else and discussion is often hampered. Third, teachers are "outsiders" who are expected to teach and not to become involved in village affairs. So the teacher has difficulty relating to the audience interests, especially in non-education areas, like agriculture and health, to which most OSTV programs are dedicated, and he has an added difficulty of recruiting participants because he is not a local person. Fourth, the motivation to animate is quite low because he does not receive extra pay for the extra work. Although the Minister of Primary and TV Education announced that all teachers had the duty of animating, not all are needed to do so and only a relatively few volunteer; most are appointed by the school principal.

Training takes place in a week long seminar held at the TV production center in Bouaké once a year for new animators. In 1975 there were about 500 participants who were trained by staff from the OSTV. Again, though the theory of animation rurale is prevalent in the Ivory Coast, the practice often is distant from the ideal. This is true especially when teachers are appointed as animators and are not local and are far removed from the

background or interests of the spectators.

Recruitment of participants suffers from some of the above structures of OSTV. Teachers are urged to recruit permanent participants to form a teleclub. However, feedback reports and other research on audience participation seems to indicate a fairly small core group with a larger fluctuating number of people according to the particular program or time of year. Notice of OSTV programs in the form of announcements over radio and TV and some newspaper articles is common, though irregular. But no publicity on the part of government gives any encouragement to villagers to join discussion groups.

TSM in the Dominican Republic, being a more formalized education system, recruits and trains teachers in a distinct way. Its audience, primarily rural youth with a strong motivation to obtain a first or second degree, are self selected in a way that makes the problem of their recruitment less difficult. In 1975 the 520 field teachers were mostly young, secondary school students (43%) or primary teachers (33%) who were willing to spend six to ten hours a week correcting worksheets and answering questions for the average of thirty students that they have. The median age of the teacher was 23 years and most have been or are active in some community or religious organizations. This latter element is important because as White (1976) points out, the average pay for the weekly work is only about \$4.50 which is small for the amount of work demanded. Most teachers are motivated by a spirit of service to the community which s/he shares with other members of RSM.

Teachers are often recruited from among the youth and community organizations that exist in rural areas. RSM, however, provides no training

for them but gives them a detailed instruction booklet of how to enroll students, correct their work sheets, answer questions, collect the weekly fee and send in weekly and monthly reports to RSM headquarters.

Students themselves are largely self-selected, but there is publicity on the radio about RSM and there are contacts by teachers and other members of RSM of various youth organizations and community groups where an RSM cell might be begun.

Guatemala's recruitment and training of its 200 monitors in the BRE project have followed generally common practice for radiophonic projects. In the target areas of each department where the project was to begin operating, a survey of possible candidates was made, and it was found that almost every small village had at least one person who had received some sort of previous training, whether in community development, agriculture or rural leadership (O'Sullivan, 1976 b,c). An original group of 390 people was first selected for participation in a three day training seminar. A final selection of 119 was then made for about 50 villages in the first stage of the project. In addition, there was a selection and training process for the field supervisors who are to work as intermediaries between the village level and the regional coordinating office.

All monitors are from the villages where they work; they have been given some training and they work with a group of zonal and departmental supervisors. All have had some kind of previous experience or training that make them good candidates for the work. All of these positive elements, however, must be weighed against a number of problems still to be solved by BRE regarding the monitor. First, it is unclear to what extent the monitor will only be a local animator, organizing local discussion groups for the

teaching to be done by technical experts from various ministries who will come periodically to the village. On the other hand, if the monitor undertakes more of a teaching role, then he will need much more training in various substantive areas. How much a multi-media system can intervene to help the monitor has not yet been settled. Second, the question of pay for the monitor is a serious one. Many of the voluntary organizations working in the highlands fear that paying the monitors of BRE will undermine the voluntary community work done by their members. This question has already raised problems and is one of the points of friction between BRE and the many private projects operating in similar areas. Finally, the monitor is unable to go ahead with his recruitment and work in villages until the BRE itself has clearly decided on its main target audience, its specific objectives and the role of its delivery system.

Although there have been some specific teaching actions in BRE, there has not been a large audience recruitment effort in the highlands until a clear direction is taken. Nevertheless, from early experience and from some studies carried out prior to the start of the program (O'Sullivan, 1977) the problem of recruitment of participants seems a critical one. Several problems must be faced. First, BRE has promised to respond to the felt needs of the community, giving training in areas of most need. This has been easier said than done and at present it is not clear what is most urgent--an agricultural program to help increase productivity or training that might help generate additional income through crafts and small industries. Second, even if a decision is taken on an area or areas to be focused upon, the large numbers of annual migrations among highland peoples make regular recruitment and attendance difficult. Finally, perhaps the

most serious challenge is that from past experience in such work we would expect a small turnout of people from villages, the same small number of people who participate in every organization available to them and not the large target audience the project has in mind.

4. Technology's Role in Adult Education.

For most countries the mass media are elements of central importance to both political and educational goals. But educational projects differ in the way that technology enters into the learning process, and this is even more true of adult education projects. In some, the media are "small" (radio, slides, videotape recorders, etc.) and are more locally controlled (Evans, 1976). In others, the "big" media (TV, computers, satellites, etc.) predominate and the tendency is toward more centralization (Schramm, 1977). There are almost always, however, other forms of communication that enter into the process--printed and visual materials, interpersonal interaction and feedback loops. How the technology is chosen and integrated, how central it is to the process of message delivery and learning, all vary from project to project.

It has been the advocacy of a "rational" decision model by planners (e.g., McAnany, 1973) that is most common in print and least common in action. An instructional medium like radio or television, under this model, would grow out of a needs assessment, clear definition of objectives and a careful analysis of which medium or combination of media could best serve these objectives. But action is often less "rational" than this, and the choice of medium, far from being a conclusion, often precedes any serious analysis of the educational problem.

The Ivory Coast is a country for whom the mass media have become an important part of its infrastructure as well as superstructure in achieving social and economic goals (Laurent, 1970). The Ivory Coast had early experimented (1963-1966) with television for teaching literacy to urban factory workers (Unesco, 1967). Hence, it is not surprising to find in the first five-year plan (1971-1975) that mention of adult education needs are coupled with a recommendation that the mass media be used in their fulfillment. In 1971 the ITV system for primary schools was begun. By 1973 OSTV was begun with the explicit justification that by using educational television for adults as well as school children the efficiency of the system would be enhanced.* Ironically, only later in 1974 and 1976 were efforts made to define more clearly the pedagogical objectives for OSTV. Then the choice of a big medium like television really seems to have preceded the decision of how it was to be used. In principle, the choice could have been between TV and radio, but circumstances did not allow certain kinds of logic to predict choice. (For example, radio is a much more widely available medium** with experience in multi-lingual programming reaching a majority of the 90 percent illiterate population in rural areas. On the other hand, it was argued, TV would provide images as well as sound and thus appeal to

*In the light of a recent cost study (Eicher and Orivel, 1977), the increased efficiency of the system by including OSTV as part of the Ministry of Primary and TV Education is more than offset by increased costs, since OSTV makes little use of TV production facilities located in Bouaké but has their office in Abidjon (400 kms. to the south).

**According to a recent Ministry of Information internal document (Ivory Coast, 1976), 50 percent of rural households have a radio set while only a tiny fraction of these households own TV's. This is in the first place due to the lack of electricity in the villages. It should be noted, however, that in the 1976-1977 school year, about 1300 non-electrified villages (out of about a total of 8000 villages) had a primary school equipped with battery-operated TV receivers.

more sensory channels.)

The television broadcast itself carries the bulk of the message for the OSTV system. In most cases it is the only message source for the audience since posters and other printed materials have been rare, although the animator has printed support documents to refer to. To get the discussion going among people, the animator must depend solely on what the audience got out of the 30 minute French broadcast with the running translation in the local language. An advantage is that almost all OSTV broadcasts are shot on location in villages, and scenes and actors are closely identified with village life.

Tanzania (excluding Zanzibar) is one of the few countries that has made a clear decision not to have television. Consequently, the only available electronic medium is radio. The Radio Study Campaigns are partly premised on the fact that this medium is widespread, even in rural areas.* But radio does not play as central a role in message delivery as does television in the Ivory Coast. In addition to radio, Tanzania puts heavy emphasis on the printed study guide from which the discussion leader reads aloud a summary of program contents once the broadcast is over. This mechanism insured that about half of the 2,000,000 participants in the 1973 campaign who were without radios were able to function in much the same way as the other groups (Hall and Dodds, 1974). In addition to study guides for everyone (who can read them) the group leader has his own manual and, in later campaigns, a flip chart and posters to stimulate discussion and learning.

* Although only 27 percent of the adult population owns radios (with probably fewer in rural areas), almost 60 percent has access to daily listening (Matiko, 1976).

It is true to say that radio was not absolutely necessary for the functioning of certain groups that did not have access to a set during the last two campaigns. Yet radio on the whole was an important component in the campaigns, providing messages and a specific gathering time each week, as well as publicity, music and information, and a sense of sharing with others across the country that a campaign without the radio would have had difficulty in achieving. In short, although radio was not absolutely necessary for content, its role in motivating people seems to have been central.

The BRE in Guatemala has not yet finally settled its message delivery system. Like those in the Ivory Coast and Tanzania, the project in Guatemala will probably finally settle on some combination of group leaders or monitors, printed materials and mass media. Television for rural areas is not a feasible option but radio is quite widespread* and native language broadcasts are made for some of the many Mayan language groups, though Spanish language programs predominate on the commercial stations. The final definition of radio's role in BRE is complicated by several factors. It would be accurate to say that foreign contributors to the project have different approaches, one group placing emphasis on a face-to-face approach of monitor or field agent with the local village audience and the other arguing that with few field agents and poorly trained monitors, radio should be the main message delivery system. Another factor is the presence of a radio experiment for agricultural information that is coming

*Several recent surveys in the rural areas of the western highlands where most indigenous people are concentrated indicate a level of radio ownership of 54 percent. These 54 percent and an additional 6 percent (total 60 percent) are frequent radio listeners (O'Sullivan, 1976a, 1977).

to an end. The experience, trained personnel, programs, and even studio facilities give a significant tilt in the direction of a more central role for radio. In addition, the U.S. agency that backed the agricultural radio experiment is now providing assistance to BRE as well.

The RSM of the Dominican Republic has a much more explicitly instructional system than the other three adult education projects. The provision of the first eight years of primary education is done, as we have seen, in a distance learning mode. There are several characteristics of the technological component that need to be made explicit in this section.

First, radio is central to the instructional system. The programs that the student listens to each evening provide the basic stimulus for work. The work sheets are geared explicitly to the broadcasts, and it would be difficult if not impossible to do the RSM study course without access to a radio. The widespread availability of radios in the Dominican Republic, even in rural areas (and especially among RSM students who are of a slightly higher SES standing than average), makes the home-based study system possible and helps avoid the need to travel to a school.

The second feature of RSM's use of radio is programming. An active type of learning is encouraged so that the student makes active responses to each program segment (of math, economics, Spanish, etc.) and responds in writing on his or her worksheets. In addition, the student has short periods between broadcast segments to spend on the written assignment which s/he must complete for the teacher each week. Moreover, the pace of learning is partly enforced by the amount of time that programs allow students to respond both during and between segments.

A third element of the radio is that RSM not only has instructional

programs on primary school subjects but two other broadcast components that contribute to the audience's education. First, there are a series of "nonformal" programs on topics of interest to adults, including religious and family-related topics, health and agriculture. Second, the daily news information forms an important part of the adult's "informal" education, providing him or her with local news (about social and political events as well as weather and market information) and news of the nation and the world. This means that through the same radio, the student will be exposed to a varied but related set of stimuli touching on instruction, information, culture and recreation. The RSM radio station, then, acts as an "educational" center in a much broader sense than is usually the case with a school (White, 1976).

5. The Feedback and Evaluation Systems.

Feedback and evaluation are common words in the plans of many adult education projects, especially those employing some form of technology and distance teaching. Essentially they are organized ways of gathering information for managing and assessing projects. Feedback and evaluation are often used interchangeably, but let us draw several distinctions. What we mean by feedback in this discussion is limited to the organized way of gathering and exchanging information among the various members of the adult education project. Ordinarily, it encompasses information on how the project is operating at the individual or group level, and provides management information for improving operations. But it also may gather information about the effectiveness of learning, the adequacy of the message or some specific problem in the students' or teachers' activities. Feedback

generally refers to information gathered for immediate action for improving some instructional or operational aspect of the project. Evaluation usually refers to information gathering that looks to a somewhat longer term assessment of the project's success or failure.

There are a number of problems with implementing the systems of feedback and evaluation that have been proposed for adult education projects. But let us mention only three. The basic problem is one of understanding. Many projects simply do not understand what information to gather and so never bother making the system work. A second problem, now more common but no less acute, is that many projects set up elaborate and time-consuming information systems but make little or no use of the information that is gathered. A final problem is that feedback is seen as a one-way system to monitor what is going on but not as a two-way communication system for project managers and workers to be in touch with the target audience. Let us examine our four projects in the light of their planned and/or operational feedback and evaluation systems.

The RSC's of Tanzania have employed the common feedback procedures of weekly written reports (by a secretary of the group) with information about numbers and kinds of participants, questions about procedures and questions about substantive matters. A final, summative evaluation (especially during the last two campaigns) was based partly on the feedback information and partly on separate surveys and village-level observations. There are several serious problems with the Tanzanian system, the first being a structural one. Since campaigns are usually only ten to twelve weeks in duration, feedback has no chance to influence the nature of the printed and radio messages which are usually completed before the campaign begins.

Secondly, the relatively slow process of gathering weekly information and processing it for some decision/action means that the most urgent management decisions (e.g., material not arriving to go with broadcasts) would have to be communicated by face-to-face or telephone messages if the problem is to be remedied in time. Third, the campaign structure is not one to provide genuine dialogue between center and periphery since the objectives are clear and narrowly defined beforehand for achievement in a relatively short period of intense activity.

In order to overcome the centralized nature of the campaign, Tanzania tried to decentralize the evaluation of the 1975 campaign (Matiko, 1976). Thus ward, district and village were to generate reports on numbers of participants, discussion, learning and subsequent actions. In a country the size of Tanzania with the approximately 2,000,000 participants in 1975, one wonders how evaluators could monitor the quality of the data gathered and whether some reasonable sampling scheme was followed so as not to be overwhelmed with information from most of the 75,000 discussion groups. A final evaluation question that the Tanzania case does not make clear in its documents (Hall and Dodds, 1974; Matiko, 1976) is how the evaluation and feedback information affects the nature of the subsequent campaign.

The OSTV feedback system is distinct from that for evaluation. All animators (in previous years only a sample of them) are asked to complete and send back each week a feedback report with data on attendance, discussions and audience questions and special interests. Space for remarks often elicit lengthy comments from the animators. In addition, animators and listening groups send a fair amount of unsolicited mail to OSTV with comments, questions and requests. The advantage that OSTV has over the Tanzanian case

is simply that there is a permanent institution which can react to its audience over a longer period of time than the brief campaign period encompasses. Feedback questions are answered in two ways, either in written form in a quarterly booklet or sometimes a TV broadcast is devoted to questions touching a broad section of the audience. Though feedback is given to the audience, audience or animators' reactions have not influenced the OSTV programming.

The evaluation of OSTV is carried on by the Evaluation Unit of the Ministry for Primary and TV Education. This work concerns impact, process and cost-benefit evaluation. A mixed group of local and foreign researchers carries on studies of the impact of ETV in formal primary schools and OSTV groups, as well as studies of management and technical evaluation.

The feedback system of the RSM project in the Dominican Republic is unique among the four cases because it is incorporated into the vital functioning of the system. The student interacts on a weekly basis with the teacher, receives feedback on his/her homework, receives next week's supply of worksheets and pays the teacher for these. Without this interchange, the student does not get the worksheets and cannot really follow the class without them and the teacher does not get paid and cannot send a portion of the money to RSM headquarters. In turn, the teachers send weekly reports and money to the RSM production center, and it is in the light of reported enrollments week by week that new worksheets are printed and sent out. Any failure of the teacher to send reports or payments to headquarters for any length of time will evoke a visit from one of the six field supervisors. A monthly newsletter to teachers keeps them informed from the RSM project directors. The system is a highly interdependent one and information is

essential to keep it running. It has an unusual system of checks and balances. For example, since the student pays each week for the services of the teacher, s/he will quickly notify project supervisors if the teacher fails to do his/her duty. Or if the teacher does not keep in weekly contact with headquarters, s/he will not receive worksheets for the students.

Evaluation as a longer term endeavor has not been part of the RSM project until recently. White (1976, 1977) was asked by Unesco to make a summative evaluation of the project, attempting some cost and effectiveness measures. This was carried out in 1975-1976 and results seem favorable to RSM in comparison with the traditional adult educational system. It is not clear to what extent RSM itself will be able or interested in using that information for any internal changes.

The BRE of Guatemala has just begun to operate, and it is not clear how the different feedback mechanisms proposed there will actually operate. What does seem clear structurally, however, is the two levels of management. The headquarters for the secretariat, of BRE is in Guatemala City at a distance from the highlands where the work is to be focused. The regional office in Quetzaltenango is to be the operational headquarters. Feedback of a managerial kind (delivery of materials, monitors not appearing for discussions, etc.) will be received and reacted to at the departmental or regional level. Information about content, message format or effectiveness will be channeled to Guatemala City where the software production is centered. The number and ratio of supervisors to monitors may permit, at least at the early stage, a good deal of regular face-to-face communication. This may later have to be systematized into a more mechanical, written form. The longer term evaluation questions are being posed by the evaluation and

research unit in BRE headquarters in Guatemala City. We cannot predict, at this point, whether evaluation information will be regularly collected or, indeed, if collected, it can serve any real need for project management or change.

6. Effects and Impact.

Suchman (1967) in his treatment of evaluation speaks of five categories or levels of evaluation: effort, effect, adequacy, efficiency and process. The first, effort, deals with what was actually done in a project, the number of people reached by the intervention; effect refers to whether the intervention produced any change in the target population; adequacy refers to the proportion of the population affected; efficiency refers to the relative effectiveness to the costs of the intervention in comparison with alternative measures; process refers to the study of various intervening elements that affect the outcome of the project.

If we were to apply these levels of evaluation to the four adult education projects we are reviewing here, we would find that all had fallen short in being able to measure effects (shorter term outcomes) and impact (larger term outcomes). There are several reasons. First, nonformal education is often difficult to measure even under ideal conditions, because goals are vague and objectives are multiple. Second, the difficult conditions of rural areas and the dispersion of the projects often make careful evaluation expensive and difficult. Third, many adult education projects do not see the benefits in evaluation for their constituencies. We shall now review briefly what information on impact is available from three of our four projects. (Guatemala has no impact data since it is only beginning.)

Effort: Most projects collect effort figures simply because this is the most common political justification for continuation of the intervention. Often these figures are inflated or pure fiction.* In the cases treated here we have fairly reliable figures. Table 1 summarizes some effort figures for the three projects for which we have statistics. Tanzania's campaigns built up gradually from 1960, reaching an estimated 2,000,000 participants or about 25-30 percent of the rural adult population in 1973 and again in 1975. How reliable are these figures and what do they tell us? The number of groups for which leaders were trained and booklets were provided seems fairly clear. Estimates of how much these groups met as well as average attendance are harder to ascertain, though again even a 20 percent margin of error could not reduce the total participants below 1,000,000. It is clear from such figures that Tanzania has succeeded in mobilizing a large number of rural adults to listen and act on messages created by the government. This conclusion is independent of questions of other effects to be considered below.

OSTV of the Ivory Coast is quite different from Tanzania and cannot be directly compared. First, it is an ongoing adult information program with programming continuing over about nine months of each year, not two or three months every other year as in Tanzania. Second, it uses TV schools

*There is an illustrative anecdote about such a political ploy. A newspaper in a certain country published an article one day accusing the Ministry of Education of only creating 400 literates during the past year in the whole country. The next day, in reply to the charge, the Minister gave the newspaper figures of over 100,000, counting, among others, one project with 30,000 new literates when it did not even teach literacy, and another project with equally impressive figures when the latter project had not even begun operations. The sad end to the humorous story is that the newspaper did not investigate or challenge these figures!

TABLE 1

SOME FIGURES FOR THE IVORY COAST, TANZANIA,
AND DOMINICAN REPUBLIC PROJECTS

Ivory Coast Out-of School Television

<u>Year</u>	<u>Total No. TV Schools</u>	<u>Average Number TV Schools With Animation</u>	<u>Average Number Participants Per OSTV Session</u>	<u>% Target Population*</u>
1973	700	35	2,520	
1973-74	950	132-160	13,090	5.0%
1974-75	1,152	65-468	16,024	5.0%
1975-76	1,481	81-566	15,725	3.3%
1976-77	1,652	-----**	-----	-----

*Target population with access to TV school: 319,280 in 1974-75; 471,720 in 1975-76.

**Data not yet available.

(Sources: Fritz, 1976; Lenglet, forthcoming)

Tanzania Radio Study Campaigns

<u>Year</u>	<u>Number of Groups</u>	<u>Number of Participants</u>	<u>% of Adult Population ($\pm$ 7 million)</u>
1969	60	1,200*	
1970	150	3,000*	
1971	1,600	20,000	0.3%
1973	75,000	2,000,000	30 %
1975	75,000	1,500,000	25 - 30 %

*If average number of participants per listening group = 20.

(Sources: Hall and Dodds, 1974; Matiko, 1976)

Dominican Republic Radio Santa Maria Equivalency Schools

<u>Year</u>	<u>Grades</u>	<u>Enrollment</u>	<u>Promotion</u>	<u>Enrollment Regular Adult Education</u>
1971-72	2-6	12,238	5,813	
1972-73	1-8	22,375	13,915	
1973-74	3-8	20,171	10,476	
1974-75	3-8	20,109	11,936	40,000 (urban pop.)

(Source: White, 1976)

as discussion group points in rural areas and these are not accessible to more than a proportion of the adult population. Third, because of problems with getting teachers to volunteer extra time to be animators (outlined above in section 3.) many rural schools are not even opened for discussion groups, thus limiting even more the potential audience. The availability of some radios on a wide scale in rural Tanzania means that the potential listening audience is also greater. Although the figures in Table 1 do not indicate this, there is a notable fall off in attendance in OSTV discussion groups both from the beginning to the end of each program year (October-June) and over time since its full scale operation in 1974. Even though more ETV schools are opened each year and more teachers do volunteer to be animators, the average attendance has not risen, indicating a decline in average group size and in the number of regular listening groups (cfr. Fritz, 1976; Lenglet, forthcoming).

The RSM schools in the Dominican Republic indicate a rapid growth in enrollment over the first four years of the project life. We have also noted (from White, 1976) that RSM schools had reached nearly every section of the country's rural areas by late 1975. Comparison with the regular adult schools is not very meaningful since RSM and the traditional adult schools serve different constituencies, the former being 80 percent rural and the latter wholly confined to urban areas. In the case of RSM the figures are very reliable. The steady number of around 20,000 students enrolled for the last three years (1972-1975) may mean that this is the maximum number one can expect for the 15-22 year age group from which RSM largely draws. One could also argue that the number could rise as RSM expands to more groups wanting a primary (6th grade) or intermediate (8th grade) degree. Conversely, one might argue that the number will decline

as RSM skims the cream from rural youth and these migrate to the city, leaving a larger but less motivated group behind. One might also add that RSM numbers might decline as complete rural primary and intermediate schools are built and rural students stay in traditional schools longer.

Effect: Suchman asks about whether any change occurred with his question about effect. This could include both intended and unintended results. This level of evaluation becomes more difficult than merely counting numbers of participants since change must be measured somehow in a valid and reliable manner and in a sample that may provide the basis for generalizing to the entire participant group.

Tanzania conducted a considerable evaluation effort on various effects in the 1973 campaign (Hall and Dodds, 1974; Hall, 1973). Reading the reports closely and considering the vast size of both the country and the population to be sampled, we must say that results are both as good as could be expected and not as much as one would want. Keeping in mind the main finding that about 1-2 million adults participated, we can examine both learning effects and actions performed as rough estimates of impact. Hall and Dodds (1974) report an 11 percent gain score on a learning test. Though a significant gain statistically, we cannot be sure of the reliability of either instrument or its application and thus with a gain of this size we could attribute some or all of this to error. On health actions following from the discussions, we perhaps are on somewhat firmer ground. Supervisors' reports, for example, showed that 20 percent of the groups visited by them engaged in building or repairing latrines. Twenty-eight percent cleaned their compounds and surroundings, 19 percent destroyed containers of stagnant water, 12 percent boiled and/or filtered water, etc.

In 1975 the nutrition campaign attempted to decentralize the evaluation effort. Only general guidelines were provided to different regions and districts, and data gathering was encouraged at the most local level. The problems of reliability are enormous in such an approach, but the trade-off may be a greater participation in the evaluation by local people for whom the information may be of greater immediate benefit than a more centralized effort.

The Ivory Coast's OSTV has not yet published results of impact studies on the entire program, but a study of a single series on water (Lenglet, 1976b) has produced some results that one may consider as indicative of longer term impact for the project as a whole. For example, the national sales of water filters showed a significant increase during and after the series. A visit to a sample of 23 villages (Grant and Seya, 1976) indicated that a number of actions had been taken concerning water. In his follow-up study of the water series, Lenglet found that of 235 villages, 18 villages had constructed or repaired their well and that 36 were in the process of an action of this kind. In a sample of villages, Lenglet found indications from individuals interviewed that not only actions but some learning had taken place as well. About half knew what the water filter, boiling water and the latrine were used for. In a related study, about 80 percent of a sample (Lenglet, 1976a) received a score of at least 6 out of 10 correct answers on a test of knowledge about a map of the Ivory Coast used in the water series. There are a number of methodological questions one could pose concerning the reliability of the findings and their generalizability, but the weight of the various sources of evidence indicates not only that people watched OSTV but seemed to learn and be motivated to act on the suggestions.

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The main results of White's study (1976) is a comparison of learning results on a common test of students from RSM and the traditional adult education. He concludes: ". . . that where the field teachers of RSM were functioning at an adequate level, the median examination scores of RSM students at both sixth and eighth grade levels were higher in all subjects than similar students in the system with conventional methods. In the district where the field teachers of RSM were notably weak, the median scores of RSM students at the sixth grade level were about the same as students in the system with conventional methods, but RSM students at the eighth grade level in their district had lower median scores in all but one subject."

Adequacy, Efficiency and Process: As we ascend the scale of evaluation studies, it becomes more difficult to answer certain questions. The magnitude of effect, for example, is hard to measure in anything but gross ways. Tanzania reached about 25-30 percent of its adult population in the last two campaigns, but how much the campaigns affected the learning or activities of these people over the ten to twelve weeks of the campaign and in what aspects are life ways changed as a result is very difficult to tell. Hall and Dodds (1974) do quote costs, and their figures are so low (especially for radio and print costs) that it is difficult to imagine a more efficient alternative operation. The process evaluation is something that Hall (1973) has attempted but little more than anecdotal data are available. This case study approach, however, has provided some recommendations that should have helped to improve the subsequent campaign of 1975.

OSTV of the Ivory Coast reaches less than one percent of the total rural adult population and only about 3-5 percent of the population with

access to TV schools. Is this adequate? Certainly not if we examine the goals of OSTV. The extent of impact in terms of learning and action is also unknown as we do not know to what extent OSTV is effective even if we had a better idea of costs (Klees, forthcoming). Concerning process, OSTV is considerably better off. There have been several case studies (Grant, 1976; Benveniste, 1976; Grant and Seya, 1976) that have documented the process and problems that OSTV has encountered at the village level. There are a number of concrete process items that are suggestive of how OSTV operates among the clientele that makes effort and effect data more interpretable for project managers.

The RSM project in the Dominican Republic has little or no adequacy information, although the increase in the pass rates of students from 1973 to 1975 may indicate a better functioning system. The costs of RSM have been gathered by White (1976) and some comparisons made with traditional adult education. Cost figures are favorable to RSM and even more so were we to extrapolate to a larger population. Relatively little information exists on how RSM functions, and therefore little can be concluded about the process.

7. Constraints.

Constraints are barriers to the adult education systems in achieving their goals. Some of these constraints are external to the systems and are not directly under the control of project decision makers. Others are internal to the systems and may or may not be under a decision maker's control. It is part of our task to touch upon these constraints and to give some estimate of how serious they are and how or whether they might be overcome.

a. External Constraints.

These may be summarized as structural constraints, ideological constraints, political support or leadership constraints and constraints of institutional permanency. It would be too long to detail each of them with regard to each project under review, but let us give a general notion of how each relates to adult education and specifically the applicability to our four projects.

Adult education destined for rural areas is often faced with the unrealistic task of changing the structures of rural poverty (Coombs and Ahmed, 1974). Often improvements in the "quality of life" are substituted as a more palatable formulation. Yet rural adult education must face the issue of its relevance to the most pressing problems of survival for rural adults. Insofar as the goals of projects are directly focused on the larger questions of rural transformation, these projects must face the problems of the social and economic structures that underlie the situation. A single manifestation of the problem could be highlighted for all four projects in the question of who participates in and benefits from the adult education classes. There is evidence in the Ivory Coast, Guatemala, the Dominican Republic and even in Tanzania, the only avowedly socialist country of the group, that social structures at the village level affect who attends the meetings or classes, what direction discussions take, what kind of follow-up action is possible and what changes are implemented. When local elites tend to be interested, the program will best serve their interests, but if only the marginal people participate, learning results may not be immediately applicable because resources are lacking and the main effect of learning on the young is to encourage them to leave the rural areas

(Schmelkes de Sotelo, 1977).

When adult education projects advocate structural change for rural areas, they are considered to be ideological and political by power holders, even though all education has an ideological aspect whether change or status-quo in its orientation. Tanzania's campaigns have a clear political and ideological purpose in their mass mobilization efforts (Vermillion, 1975). Radio Santa Maria, as a privately operated project, has to be more careful of its expressed ideology lest government disfavor close down its radio station or withdraw official recognition of their degrees. Despite these constraints, RSM does avow an official position in solidarity with the campesino and in favor of social change. The Ivory Coast OSTV programs do not question the existing power system and socio-economic stratification but rather as an animation rurale project explains the development plans of the government to the peasants (Elliot, 1974; Moulton, 1977). Finally, BRE in Guatemala as a government project does not attempt to challenge existing structures in the highlands area, oppressive as those structures may be.

A third important external constraint for adult education is the lack of political support or the lack of significant leadership within the project to generate that support. Tanzania again demonstrates the positive case. President Nyerere himself has openly placed high priority on the development of rural areas, and the RSC's are a chosen means for accomplishing this priority. RSM in the Dominican Republic, on the other hand, is a project in private hands, but through the capable leadership of the director the radiophonic schools have not only functioned quite efficiently, but have also gained the official recognition and support of the government. OSTV in the Ivory Coast, by contrast, represents only a low priority on the government's

education agenda, of which its chronic budget problems are only a manifestation. Guatemala, however, has at least verbally placed a high priority on its nonformal education project. The many problems that have delayed its beginning are only partly explained by the earthquake of February, 1976 and the fact that it lost an early advocate when one of the people who originated the idea of BRE left his government job. The number of setbacks are only symptomatic of an unwillingness and/or inability of the government to place a real priority on BRE's success.

Finally, all nonformal adult education projects face the problem of institutionalization. Unlike formal education which has thousands of teachers, school buildings and a large automatic budget each year, nonformal projects are often of an experimental nature ready to disappear the first time there is a budget squeeze. Or else adult education is the poor cousin of education ministries, existing on a regular budget within the bureaucracy but often one so small as to be ridiculous.

Tanzania has put a priority on adult education and has recently upgraded the Institute of Adult Education to the status of an independent government agency (no longer a part of the university). We suspect that the Institute will retain a permanent and growing place in the Tanzanian government, but how the radio campaigns will evolve will depend on a number of factors. RSM in the Dominican Republic has put down sturdy roots at present, but its institutional permanency is more dependent on social circumstances than that of Tanzania, for example. Continued good relations between RSM and the government may depend on whether the conflicts of campesinos over land holdings flair up or not and the degree the RSM would become involved. RSM may experience problems were its director to leave the

project for any reason. OSTV of the Ivory Coast recently had its position somewhat reinforced by a government decree saying that it was responsible for all education via mass media in the rural area. Nevertheless, there has been a long history of discussion over the precise division of responsibilities for three areas in which OSTV worked: broadcasting (shared by an agency of the planning ministry) and education. Any redefinition of responsibility in one or more of these areas could very much affect the future structure of OSTV. Guatemala has tried to create a genuine inter-ministerial agency for its nonformal education, but it is not clear at present whether this was a good idea, given the problems BRE has faced. Moreover, the recent creation of a larger nonformal education sector within the Ministry of Education does not seem to bode well for the permanent institutionalization of BRE.

b. Internal Constraints.

The internal limitations refer to those problems with the functioning of the project that we have referred to above under the different components of the system like objectives, organization, reception, and feedback. We shall briefly refer to several others that often present problems to projects: financing, training, content, reception and followup.

Internal constraints often seem to be more under the control of project managers than the external ones referred to above, yet the evaluation of media based education projects often demonstrates the severe limitations that internal as well as external factors place on their impact (Spain, Jamison and McAnany, 1977; Jamison and McAnany, in press).

Tanzania, Guatemala and the Ivory Coast all finance the operational part of their adult education project through government budgets, yet each

does depend for some financing (either for equipment, technical assistance, etc.) on international or bilateral funding. RSM in the Dominican Republic is self-financing for most of its operations but does depend on international funding for capital equipment. In one sense, RSM is in a better position because it does not depend on a government budget each year for survival. Tanzania has given the budget priority to rural adult education and has, consequently, the strongest institution and the best chance of survival.

Many media-based projects have suffered from lack of trained people at their inception, both in technical, hardware as well as software areas. Some put off training until after the project has begun, depending at the beginning on foreign technical assistance or else simply depending on the good will and enthusiasm of their untrained staff. In our cases, much of the training of local people has taken place on the job or in short study visits outside the country. Tanzania began with more outside technical assistance, but now after almost nine years of experience with campaigns, there is an almost entirely trained local staff. OSTV in the Ivory Coast, again, began with a number of French filmmakers and other foreign technical assistants working in the project. Gradually, Ivorians have been trained but still there are a number of leading positions filled by foreigners. RSM had been operating some years before turning to the radiophonic schools in their present form. Although local people ran the operation from the beginning, they did benefit from the experience of Radio ECCA in the Canary Islands and could call upon some of the trained manpower from the Jesuits who helped run RSM. Guatemala is only beginning its BRE project. It still has some foreign technical assistants, although local people with some training and experience now predominate. A large agricultural radio

experiment that has operated in Guatemala for some years should provide backup in the radio production area.

One much neglected area in adult education is that of content, curriculum development and instructional design. Of all the projects, RSM of the Dominican Republic has done the most to develop content and an instructional system that will insure the achievement of their learning objectives. In the other three projects, there seems to be less emphasis on them perhaps because it is assumed that the monitor in the group discussion will "teach" what was presented on the radio or television. There are two additional problems with reaching rural adults with instruction. First, it is difficult to present material that is relevant for the entire mass audience reached by the media. Second, the materials may often be presented at a time when the lesson cannot be applied (e.g., advice on seeds in the middle of an agricultural cycle). We do not find in Tanzania, the Ivory Coast or Guatemala a sufficient awareness of curriculum development and instructional design nor a careful measure of the learning effects of the classes.

Although we have alluded to selection of monitors and recruitment of audiences and some of the attendant problems, we should look at the constraints in the reception phase of our four projects. We will focus on only one limitation here, but one affecting most projects of this kind, audience motivation. RSM in the Dominican Republic has been able to tap into a fairly strong motivation of rural youth to finish their primary school, often in order to move to the city and get a job (White, 1976). Tanzania has the advantage of getting people's participation for only a short time, 10-12 weeks over a year to 18 months' period. In the last

campaign in 1975, however, adult literacy classes were recruited as part of a "captive" audience, but preliminary results showed that these participants were not to be counted on once literacy exams marked the end of classes, even though the campaign continued (Matiko, 1976). During the last campaign, there were two other campaigns competing for people's attention which may have caused a falloff in participation. We need to follow future campaigns carefully to see whether the high level of participation noted in previous campaigns continues, or whether there will be a decline of interest.

We have already noted that from OSTV feedback figures, absolute attendance did not increase during 1975-76 despite expansion of TV schools and persons to animate sessions. There are a number of constraints that have been observed at the local level (e.g., Benveniste, 1976) but one that seems worth special mention is the animator's role in recruiting and keeping a listening group. If the animator is both motivated and trained to work with rural adults, this would help the level of audience participation. Guatemala's BRE is only beginning its operations but much the same problem of motivation exists. The question will be whether the content and the organization of its presentation will be of sufficient interest to rural adults to keep them attending sessions month after month.

Follow-up actions of adult education classes are crucial to continued success. The media can often arouse but cannot themselves provide resources to carry out change. President Nyerere of Tanzania is aware of this. "If people who have been aroused," he says, "cannot get the change they want, or a substitute for it which is acceptable to them, they will become discontented--if not hostile--towards whatever authority they regard as responsible for the failure" (quoted in Matiko, 1976). As nonformal education

moves closer to teaching applied skills for rural adults, the importance of resources and technical assistance from field agents becomes crucial. For formal education like that of RSM in the Dominican Republic, formal degree requirements for jobs is the external motivation and the "payoff" for students. In the other cases, the same does not hold. As Tanzania has moved to action campaigns in 1973 and 1975, infrastructure and resources are increasingly needed (such as simple tools like shovels and picks to dig latrines in 1973). Since Tanzania does not have many resources to spend on such actions, the campaigns will have to focus on those actions that are more information than resource-based.

OSTV has both a resource and coordination problem. It works with a number of client ministries (e.g., health, agriculture) and state agencies (e.g., coffee and cocoa, animal husbandry, cooperatives). Until now, these cooperating institutions have not gotten their field agents to participate in the group discussions nor in technical follow-up activity. Primary school teacher animators are neither willing nor able to promote most followup. Guatemala's BRE has attempted to coordinate the field agents from the agencies participating in the Junta running the project, but limitation of both technical field people as well as physical resources means that neither content presentation nor follow-up activity is possible in many villages.

CONCLUSION

The purpose of this paper was to present four current adult rural education projects that involve the use of mass communication technology. As an important assumption to any examination of the actual operations, we proposed that projects of this kind serve purposes of the state and that their ultimate possibility must be evaluated in terms of how they serve to improve the work skills, income and quality of life of their rural adult clientele. Then, a comparative review of the functioning of the four projects was undertaken in the light of several years of operation and some published and unpublished evaluations.

Looking at internal effectiveness alone, the four cases presented here can be classified in terms of the proportion of their target group reached and the impact of the programs on their audience.

The most "successful" is certainly the RSM in the Dominican Republic which has reached the level of maximum enrollment and through which almost half of those enrolled receive their certificate.

The second place is occupied by the Tanzanian RSC's. We have seen that a large proportion of the rural adult population participates in the radio study groups, whether a radio receiver is available or not. And there is evidence that in the first "political education" campaigns, large numbers of participants were mobilized for the independence anniversary celebrations and the national elections. For the last two campaigns, in a large number of occasions the acquisition of knowledge and successful implementation have been recorded.

The record of the Ivorian OSTV shows a decline of animator and participant activity over the last three years of its operation. Some of

the reasons for this phenomenon have been analyzed above. Evaluation studies demonstrate knowledge and action impact though there are indications that this could be much larger under proper circumstances.

The Guatemalan BRE is still in its pre-operational stages, and therefore it is too early to talk about success or failure in terms of effort and impact.

Internal effectiveness is a very limited measure of a project's success or its function. In the Introduction we have stated that in the final analysis education, information and communication projects must be studied from the perspective of state intervention, especially in the "traditional" rural areas. In this respect the external effectiveness of the four cases presented seems to be more important than the internal effectiveness. It must be recognized that these projects have effects over and above the internal impact. They are indirectly addressed at other social groups, and they are supposed to attain other than the immediate educational or informational objectives.

As noted before, Tanzania pursues a well developed explicit development strategy for which the ideological mobilization of the population is but one of the pre-conditions. The RSC's are just one of the mechanisms in this national mobilization effort. They do not only reach the large number of study group participants but they also involve the mobilization and activity of other social institutions: the political party, the university, ministries and development agencies, local teachers, etc. As these groups are (periodically) involved in national mobilization activities, so are other groups at different times when their cooperation is requested for other mobilization campaigns. Therefore, it can be concluded that apart from the

immediate goals of providing the rural population with more knowledge and certain tools to improve their welfare and to have them become a viable element in the national development process, the RSC's also serve other purposes: creating a permanent state of ideological awareness and mobilization to combat the causes of underdevelopment. Together with the manifold state interventions, especially in the rural areas, the RSC's form one of the means through which the state influences and transforms the socio-political economy of the country in accordance with the requirements of the domestic and international political and economic power relations.

The attendance figures given for the Ivorian OSTV do not include the large numbers of people who watch the "TV for Everybody" programs, broadcast over the national TV network, in private homes. Thus, though only a small proportion of the primary target group of rural adults is reached, the OSTV could have secondary effects in that the urban population, and in particular the higher income groups among them, are confronted with issues relating to government policies of rural development. They are also informed about the activities of the state development companies (who sponsor many of the TV programs) who, thus, instead of commercial advertising can "sell" their policies. Given the fact that the Ivorian development strategy is based on an economic and social transformation (in the capitalistic sense) of the rural areas, and that this is much more advanced by politico-economic decisions than by small-scale educational projects, we may judge that the OSTV's indirect political effect is even more important than its direct educational effect. The reality in which the OSTV operates gives more weight to its ideological function: confronting the urban elite with the government's good intentions for the rural masses. On the other hand the OSTV--though limited

in its impact--could have another ideological function in that it provides the state with an extra communication channel to the rural areas, and thus it could facilitate state interventions. Because we do not yet have sufficient information about the composition of the OSTV audience, we cannot speculate about whether the OSTV programs are more beneficial for one socio-economic group than for others (see Lenglet, forthcoming).

Radio Santa Maria's external effects could be rather negative, even for the immediate participants. The certificate received by the successful participants may be considered as a passport to the city. On the one hand this increases the likelihood of a rural exodus, thus draining the rural areas of their more able and energetic elements, and creating a rural population with less resistance and/or adaptive ability to exploitation or rural transformation. On the other hand, the successful radio students who migrate to the city could swell the mass of urban people looking for a limited number of jobs, thus increasing the number of jobless and consequently putting a downward pressure on urban wages. Though this latter effect might be beneficial to domestic and foreign investors and to the position of the national economy in the world market, it certainly has disastrous consequences for the welfare of the urban masses.

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